

## **ACCEPTING BIDS UNDER UNCERTAIN FUTURE DEMANDS**

### **ABSTRACT OF THE DISCLOSURE**

The present invention provides a method and apparatus for developing an optimal sales  
5 plan for multiple products with multiple price classes contingent on different possible  
realizations of uncertain demand over multiple time periods with the objective of maximizing  
expected revenue over a constrained capacity. The present invention formulates a multistage  
stochastic program that generates a quantity of each of the multiple products to be sold in each of  
the multiple time periods and a recommendation for when realized demand for at least one of the  
10 multiple time periods exceeds a planned sales volume; estimates a likelihood that the realized  
demand for the at least one of the multiple time periods exceeds the planned sales volume; and  
collects realized order data for each of the multiple time periods; and executes the multistage  
stochastic program using the likelihood and the realized order data to generate a sales plan.